CLAIMS

What is claimed is:

1. A process for producing an insensitive explosive mixture comprising depositing sonochemically aminated 1,3,5-triamino-2,4,6-trinitrobenzene (TATB) onto secondary explosive crystals.

2. The process of Claim 1 wherein the TATB is deposited in an amount of less than 15 % by weight.

3. The process of Claim 1 wherein the secondary explosive crystals are selected from the group consisting of cyclotrimethylenetrinitramine (RDX), cyclotetramethylenetetranitramine (HMX), CL-20 (2,4,6,8,10,12- hexanitro-hexaazaisowurzitane, HNIW), PETN (pentaerythritoltetranitrate) and combinations thereof.

4. The process of Claim 3 wherein the secondary explosive crystals are HMX crystals.

5. The process of Claim 1 wherein the secondary explosive crystals are in an ammonia solution.

6. The process of Claim 1 wherein the sonochemically aminated TATB is synthesized from 1,3,5-trichloro-2,4,6-trinitrobenzene (TCTNB) by amination with NH_4OH under the influence of ultrasonic irradiation.

7. The process of Claim 1 wherein the sonochemically aminated TATB is produced by dropping a solution of trichlorotrianitrobenzene (TCTNB) in toluene into an ammonia solution that is immiscible with the solution of TCTNB in toluene and reacting the same in the presence of an ultrasonic source.

8. The process of Claim 1 wherein the sonochemically animated TATB is produced in-situ during said depositing step.

9. The process of Claim 1 wherein said in-situ production comprises providing a suspension of said explosive crystals in an aqueous ammonia solution and adding a solution of 1,3,5-trichloro-2,4,6-trinitrobenzene in toluene dropwise.

10. The process of Claim 1 further comprising adding an additional. Binder after to said depositing step.

11. The process of Claim 11 wherein the additional binder comprises a polyacrylic elastomer, a phthalate, calcium stearate, or fumed silica.